

US EPA ARCHIVE DOCUMENT

FEDERAL BUREAU OF INVESTIGATION

DATE: IN \_\_\_\_\_ OUT \_\_\_\_\_ IN 10/4/76 OUT 10/22/76  
FISH & WILDLIFE FERTILITY SERIAL COUNSELING EFFICACY

FILE OR REG. NO. 39445-R

PETITION OR EXP. PERMIT NO. \_\_\_\_\_

DATE DEV. RECEIVED 8/11/76

DATE OF SUBMISSION \_\_\_\_\_

DATE SUBMISSION ACCEPTED 3CID-2B-Yes

TYPE PRODUCT(S): I, D, (1,) F, N, R, S \_\_\_\_\_

PRODUCT MGR. NO. 25- R. J. Taylor

PRODUCT NAME(S) Diuron Technical

COMPANY NAME American Carbonyl, Inc.

SUBMISSION PURPOSE For use in formulations only

CHEMICAL & FORMULATION Diuron

3-(3,4-dichlorophenyl)-1,1-dimethylurea

## 1.0 Introduction

1.1 Diuron, Karmex, DMU, DCMU, CAS 330-54-1

1.2 Percent active: 98%

1.3 Technical Product

1.4 Other environmental reviews:

38329-E	5/3/76
352-EUP-91	4/22/76
262-EXP-X	7/10/74
352-247	3/29/66
6F0495	6/14/66
8F0626	7/26/67
8F0662	12/11/67

## 2.0 Directions for Use

Technical Product  
For use in formulations only

## 3.0 Discussion of Data

Label and disposal data are submitted. Activated sludge metabolism study is not submitted or on file.

## 4.0 Recommendations

**We do not concur with the proposed technical chemical for the following reasons:**

- 1) An hydrolysis study is required. See the description which follows.
- 2) If the pesticide is discharged into the sewage system, an activated sludge metabolism study is required. See the description which follows. Depending on the results of this study, other studies may be required. If the pesticide is not to be discharged into the sewage system, a written statement to this effect is required.

**Hydrolysis.** Pesticides may enter natural waters via direct application, mobility from treated areas, industrial discharge, and as a result of disposal and cleanup of containers and equipment. Hydrolysis data are required for all pesticides. Studies are conducted in darkness using radioisotopic or other comparable techniques at different pH values (acidic, neutral and basic) at two concentrations and two temperatures. Aliquots in duplicate

should be taken at four sampling time intervals, with at least one observation made after one-half of the pesticide is hydrolyzed, or thirty days, whichever is shorter. A material balance, half-life estimate, and identification of degradation products for the pesticide must be provided. Studies utilizing distilled water provide an upper limit estimate for persistence of pesticides in the aquatic environment. Hydrolysis in natural waters may be carried out to supplement studies in distilled water.

Activated Sludge Metabolism: Pesticides discharged into wastewater treatment systems may be transformed or disrupt the treatment process. A study of effects of pesticides on the wastewater treatment process is required. Synthetic sewage (nutrients) and radioisotope material are added to activated sludge and aerated in a closed system for 23 hours; the sludge is allowed to settle for 30 minutes. A liter of supernatant (effluent) is removed for pesticide residue analysis including a material balance. Fresh synthetic sewage and test compound are added to the remaining sludge and the cycle including fresh synthetic sewage and test compound, is repeated. Dosage should start at 0.1 ppm and increase by increments to 100 ppm. Effects on microbial population must be determined by daily total counts of viable organisms in sludge.

*R E Ney 10/29/76*

Ronald E. Ney, Jr.

10/22/76

*Nancy Dodd 10/29/76*

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10/22/76

Environmental Chemistry Section

EEB Branch